

# UNIVERSITY OF BIRMINGHAM

University of Birmingham  
Research at Birmingham

## Interventions to improve adherence to medications for chronic non-malignant pain: a systematic review

Alenezi, Aziza; Paudyal, Vibhu; Yahyouche, Asma

*Citation for published version (Harvard):*

Alenezi, A, Paudyal, V & Yahyouche, A 2019, *Interventions to improve adherence to medications for chronic non-malignant pain: a systematic review*. Prospero.

[Link to publication on Research at Birmingham portal](#)

### General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

### Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact [UBIRA@lists.bham.ac.uk](mailto:UBIRA@lists.bham.ac.uk) providing details and we will remove access to the work immediately and investigate.

Interventions to improve adherence to medications for chronic non-malignant pain: a  
systematic review

*Aziza Alenezi, Vibhu Paudyal, Asma Yahyouche*

### Citation

Aziza Alenezi, Vibhu Paudyal, Asma Yahyouche. Interventions to improve adherence to medications for chronic non-malignant pain: a systematic review. PROSPERO 2018 CRD42018111569 Available from:  
[http://www.crd.york.ac.uk/PROSPERO/display\\_record.php?ID=CRD42018111569](http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42018111569)

### Review question

This systematic review aims to review the nature, process, and outcomes of interventions to improve adherence in patients prescribed with medicines for chronic non-malignant pain (CNMP). The secondary aims are to systematically review reduction in pain severity, anxiety and depression, improvement of quality of life and to review the use of theories/theoretical frameworks in the design, implementation and evaluation of interventions for medication adherence in patients with CNMP.

### Searches

The following databases will be searched from 2000 to the present: MEDLINE, EMBASE, CINAHL. Searches will be restricted to English language.

### Search strategy

[https://www.crd.york.ac.uk/PROSPEROFILES/111569\\_STRATEGY\\_20181004.pdf](https://www.crd.york.ac.uk/PROSPEROFILES/111569_STRATEGY_20181004.pdf)

### Types of study to be included

Interventions published peer reviewed studies that aim to improve medication adherence in adult with CNMP.

### Condition or domain being studied

Adherence is the extent to which a person's behaviour agrees with the health providers' medical directions. Approximately only 50% of patients with CNMP are adherent to their medications. Patients have various reasons for not adhering to their medication and this could be intentional and non-intentional. Therefore, the interventions used to improve medication adherence should be developed according to the patient's specific reasons for non-adherence. This systematic review will review the nature, process, and outcomes of interventions to improve adherence in patients prescribed medicines for CNMP.

### Participants/population

Only adults (aged 18 or over) with chronic non-malignant pain using pain medication for more than three months will be included in this study.

### Intervention(s), exposure(s)

Intervention(s), exposure(s)

1. Educational: all educational interventions that have been provided to patients by any health care professionals and aim to enhance patient medication adherence, such as information about the medication, the disease or, the importance of adhering to the medication regimen whether face to face, by phone, with written material, visual aids or mailed instructions.
2. Behavioural: any behavioural intervention such as motivational interview that aims to modify patients' behaviour toward their medication adherence.
3. Technological: any intervention for medication adherence that uses technology such as automated phone calls, simplification of the dose regimen or dose time, follow-up, etc.
4. Screen test: any test used to measure the patient's adherence to the dose regimen.

5. Economic: interventions that apply penalties or awards according to the patient's adherence to their medication, adherence.

### Comparator(s)/control

Usual care where no intervention provided or comparing two different interventions

### Context

Inclusion criteria:

CNMP is defined as pain that persists regardless of normal tissue healing and persists for 3 months or more. Therefore, only adults (aged 18 or over) with chronic non-malignant pain using pain medication for more than three month will be included in this study.

Exclusion criteria:

Patients who will be institutionalized or are otherwise not involved with administering their own medications will be excluded. Intervention that targets the healthcare provider not the patients, such as education for healthcare professionals, will be excluded. Non-original article or studies reported in a non-English language will be excluded. The effect of dosage forms on patient's adherence to medication.

### Main outcome(s)

Medication adherence.

### Additional outcome(s)

Pain relief, quality of life.

The theoretical framework used in the interventions.

### Data extraction (selection and coding)

Summary of the study: study title, authors, year, study setting, country and funding. Study characteristics: methodological aspects of research: study design, duration of study, type of the study, study population arms included, number of patients, random vs. non-random assignment blinding, control group, condition, age, definition of adherence/non adherence and their methods of measurement, typologies used to define nonadherence (intentional/nonintentional), nature of intervention, personnel involved in the delivery of the intervention, method by which the intervention was delivered, length of intervention, how the follow up of participants was conducted and by whom, how many times and how was adherence/non adherence measured in the study, tools used to measure adherence and non-adherence outcome and adherence rates. Improvement in level of adherence, quality of life and severity of pain, reduction in anxiety and depression will also be extracted including the tools used to gather these data.

### Risk of bias (quality) assessment

Risk of bias will be assessed using Cochrane risk of bias tool for the randomised controlled trials. For the rest of the study designs, CASP quality assessment tool for prospective, retrospective, case-control studies, longitudinal and cohort study will be undertaken. Independent assessment of risk of bias and quality assessment will be undertaken.

### Strategy for data synthesis

The findings will be presented using narrative synthesis. Where possible, meta-analysis will be undertaken.

### Analysis of subgroups or subsets

No subgroup or subset will be analysis in this review, only adherence interventions that targeted adult with any CNMP condition will be included.

### Contact details for further information

Aziza Alenezi  
azizaali7890@gmail.com

AAA723@bham.ac.uk

**Organisational affiliation of the review**

University of Birmingham

<https://www.birmingham.ac.uk/>

**Review team members and their organisational affiliations**

Ms Aziza Alenezi. University of Birmingham

Dr Vibhu Paudyal. University of Birmingham

Dr Asma Yahyouche. University of Birmingham

**Anticipated or actual start date**

09 May 2018

**Anticipated completion date**

31 December 2018

**Funding sources/sponsors**

Royal Embassy of Saudi Arabia in the UK, Cultural Bureau in London

**Conflicts of interest**

**Language**

English

**Country**

England

**Stage of review**

Review\_Ongoing

**Subject index terms status**

Subject indexing assigned by CRD

**Subject index terms**

Chronic Pain; Humans; Medication Adherence

**Date of registration in PROSPERO**

19 October 2018

**Date of publication of this version**

19 October 2018

**Details of any existing review of the same topic by the same authors**

**Stage of review at time of this submission**

<b>Stage</b>	<b>Started</b>	<b>Completed</b>
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	Yes
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

## Versions

19 October 2018

---

### PROSPERO

This information has been provided by the named contact for this review. CRD has accepted this information in good faith and registered the review in PROSPERO. CRD bears no responsibility or liability for the content of this registration record, any associated files or external websites.